

10/069585

A B S T R A C T

A permanent magnet field small DC motor comprising an arc-shaped rare earth
5 magnet of maximum thickness 1mm or less fabricated by compression molding from rare
earth iron based melt-spun flakes and a binder. The magnet is provided with a certain
specific portion at both ends in the circumferential direction, which has no back yoke when
the magnet is press-fit in a soft-magnetic frame. The arc-shaped rare earth magnet fabricated
by compression molding from a material containing more rare earth iron based melt-spun
10 flakes exhibits simultaneous increase of both a remanence B_r as a function of magnetizing
field and a coercivity H_cB and hence, exhibits a well-balanced demagnetization (B-H) curve
even in an unsaturated magnetized state.